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## INSTALLATION INSTRUCTIONS

for the

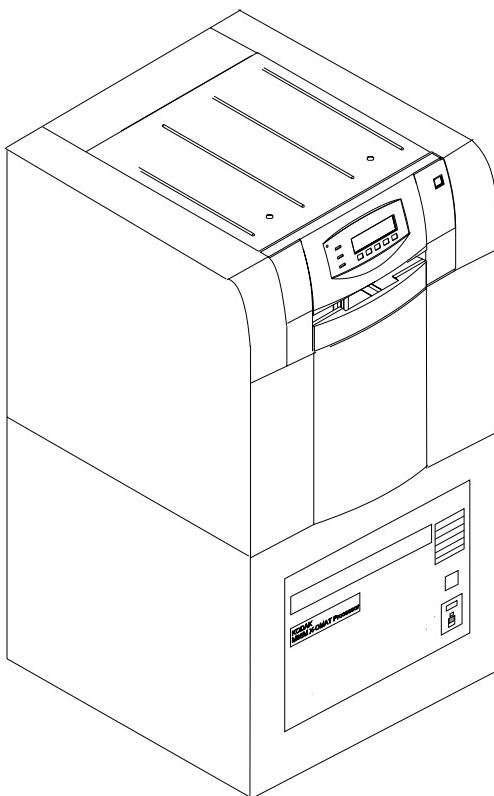
**KODAK Miniloader 2000P Humidifier up to SN 5031**

**CAT. Number 7197007**

and for the

**KODAK Miniloader 2000P Humidifier from SN 5032**

**CAT. Number 7192636**



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## TABLE OF CONTENTS

<b>INTRODUCTION .....</b>	<b>1-2</b>
<b>PACKING LIST.....</b>	<b>1-3</b>
<b>INSTALLATION .....</b>	<b>1-4</b>
Part 1 ML2000P up to SN 5031 .....	1-4
Part 2 ML2000P from SN 5032 .....	1-5
<b>FINAL TEST.....</b>	<b>1-13</b>

## INTRODUCTION

The KODAK MINILOADER 2000P HUMIDIFIER allows the relative humidity inside the ML2000P to be increased. The HUMIDIFIER should be set to 40%.

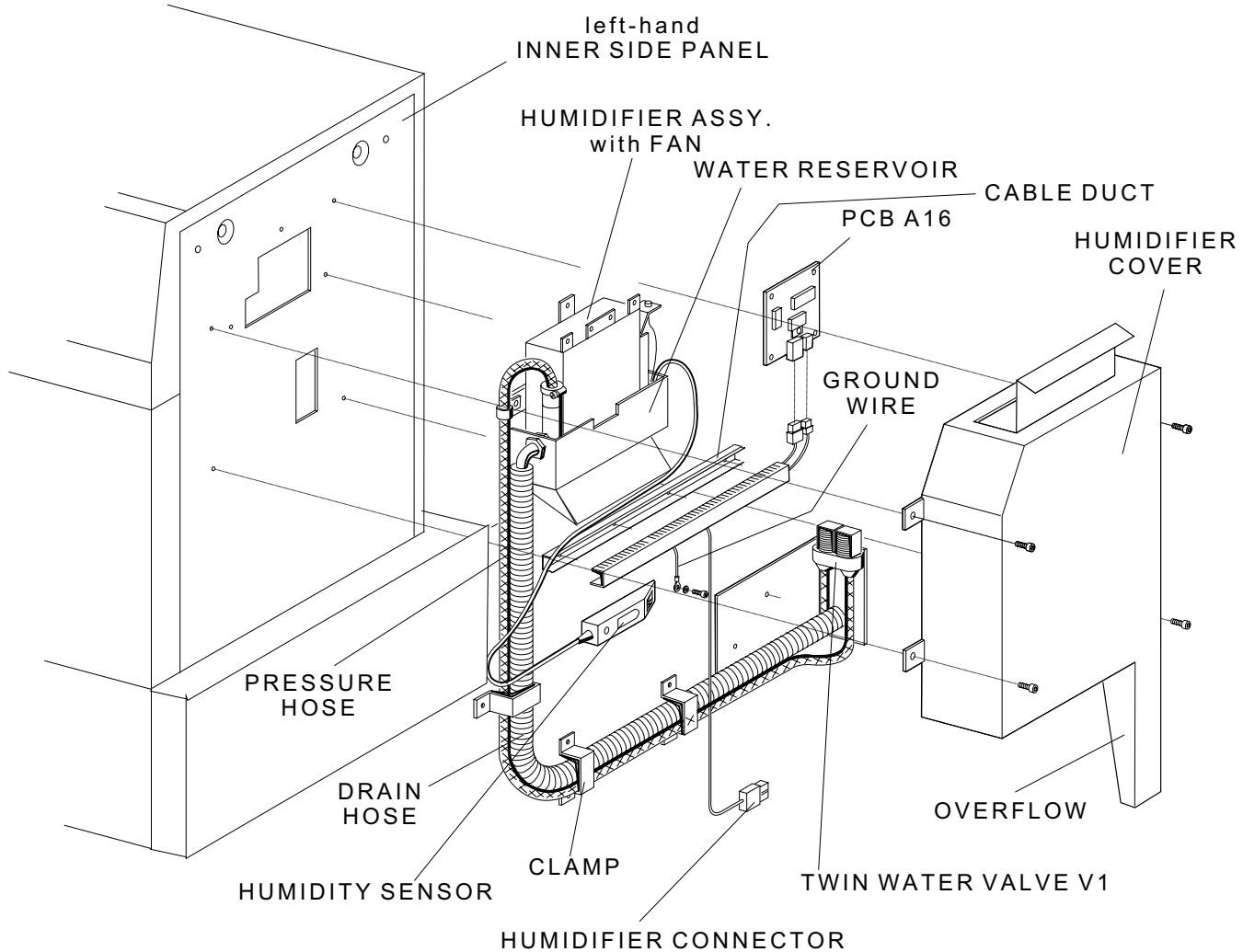


figure 1-1

**PACKING LIST**

PART NUMBER	DESCRIPTION	QTY
II3477-D	INSTALLATION INSTRUCTIONS	1
9318546	HUMIDIFIER COVER	1
9318746	OVERFLOW	1
9318666	BRACKET	1
9288426	HUMIDITY SENSOR	1
9318726	SENSOR CLAMP	1
9215636	CABLE DUCT	1
9198410	PCB A16	1
9183201	STANDOFF	4
9318516	HUMIDIFIER HARNESS	1
9318503	HUMIDIFIER ASSY with FAN	1
9318776	HOSE CLAMP 12.5	1
9318736	CLAMP	3
6081850	WIRE TIE	4
4500142	STAR WASHER	2
9318862	EXTERNAL DRAIN HOSE	1
9170182	HOSE CLAMP 16-25	3
9318791	DVGW LABEL	1
4283121	SCREW M4x10	24
4282801	SCREW M4x16	4
4480032	WASHER 4.3 mm	22
4480431	WASHER large (for CABLE DUCT)	2
500601	SELFADHESIVE SEAL	1
	EXTERNAL PRESSURE HOSE ASSY consists of:	1
9198296	MANUAL VALVE	1
G9905358	ADAPTER 3/8 to 1/2 inch	1
G9904056	ADAPTER 3/4 to 1/2 inch	1
G9906393	SEAL	1
9198031	T-ADAPTER	1
G9907057	PRESSURE HOSE with SEALS	1
	<b>The following PANELS are only needed up to SN 5031. They are part of CAT. No. 7197007</b>	
9310916	OUTER RIGHT-HAND SIDE PANEL	1
9310536	INNER RIGHT-HAND SIDE PANEL	1

## **INSTALLATION**

### **Part 1 ML2000P up to SN5031**

#### **NOTE**

This series of ML2000P is not prepared by manufacturing for the HUMIDIFIER installation. For this reason new inner and outer SIDE PANELS for the right-hand side are needed.

- 1.** Switch off the ML2000P.
- 2.** Take off the inner and outer right-hand SIDE PANELS. Discard both.

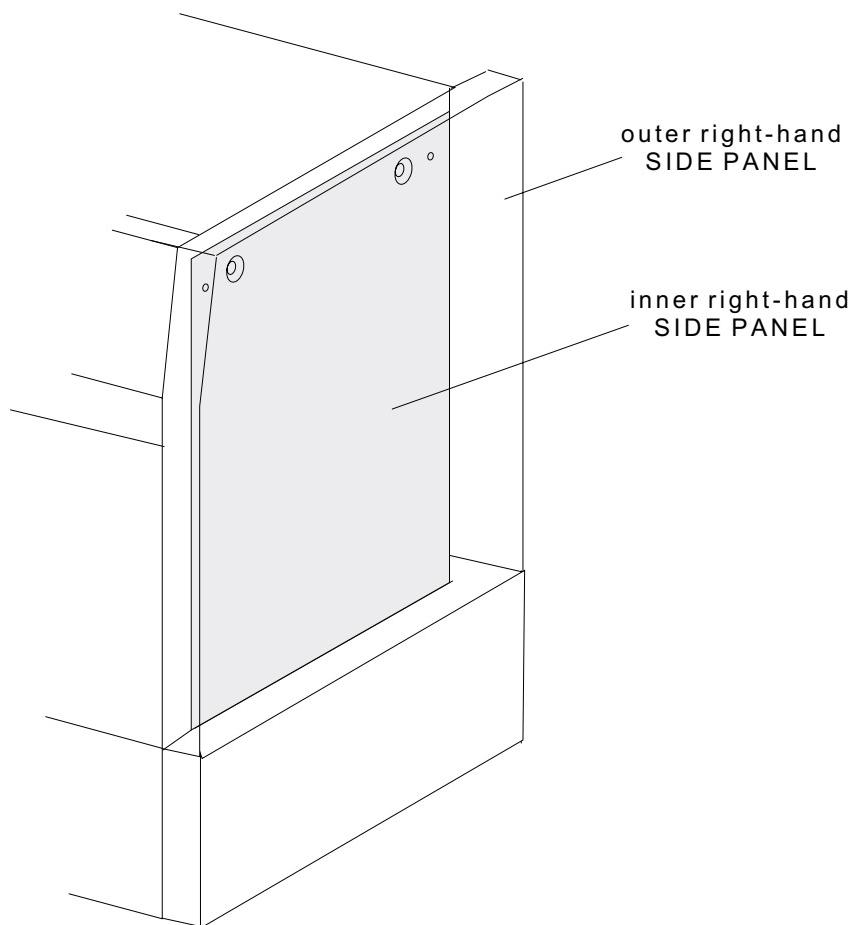


figure 1-2

- 3.** Place the new inner right-hand Side Panel on a flat surface.
- 4.** Continue with step 4 of Part 2.

**Part 2 ML2000P from SN 5032**

1. Switch off the ML2000P.
2. Take off the outer right-hand SIDE PANEL.
3. Take off the inner right-hand SIDE PANEL and place it on a flat surface.

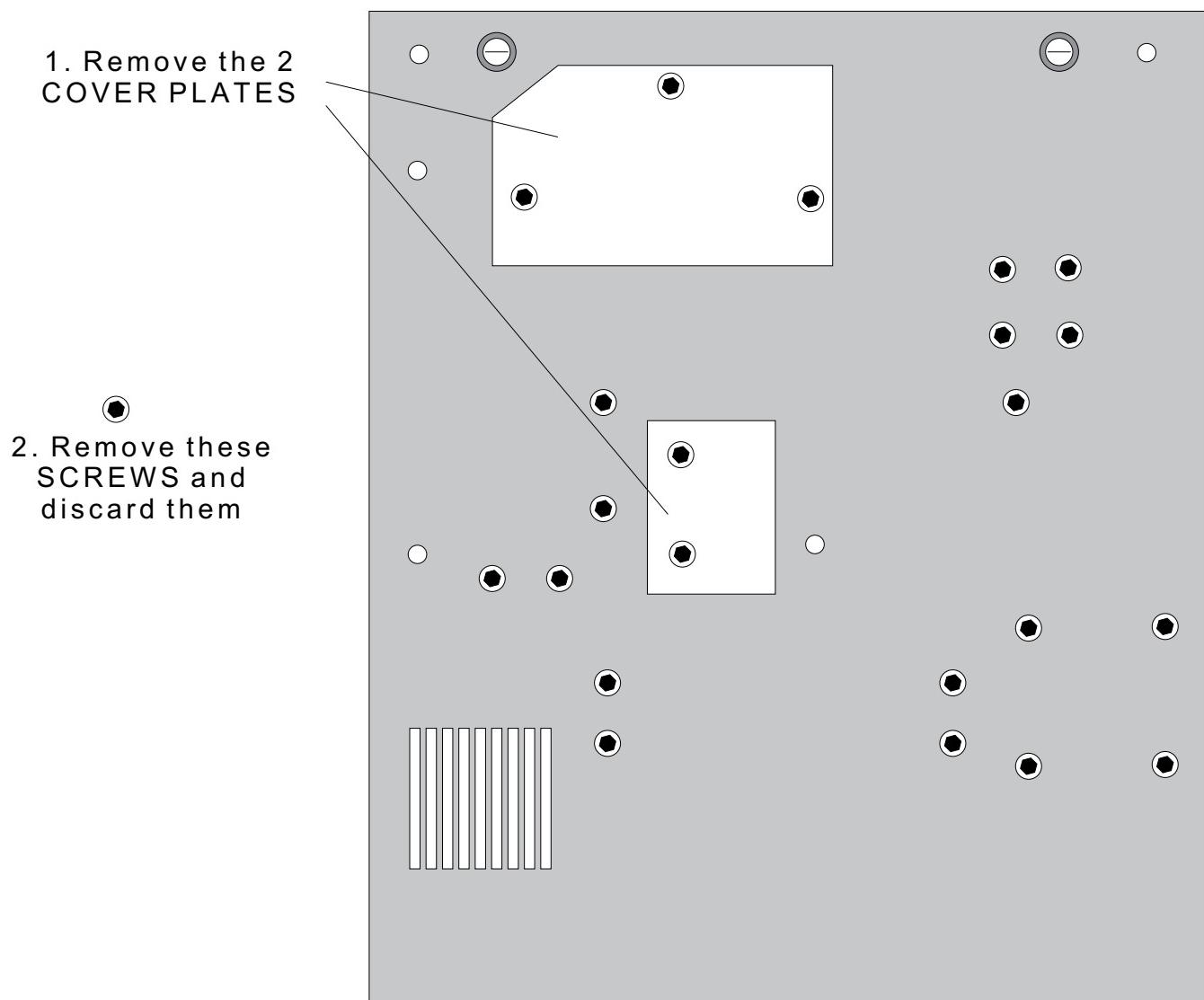


figure 1-3

4. Remove all SCREWS (marked with a Hex-head on figure 1-3) and discard them.
5. Remove the 2 COVER PLATES (see figure 1-3) and discard them.
6. Fix the ceramic RESISTOR from the HUMIDIFIER HARNESS with the CLAMP to the HUMIDIFIER.

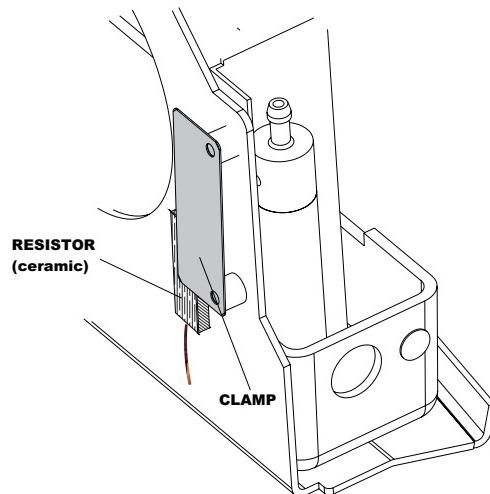


figure 1-4

7. Connect the 2 small FLAT TAB CONNECTORS to the FAN. (white to -, red to +)

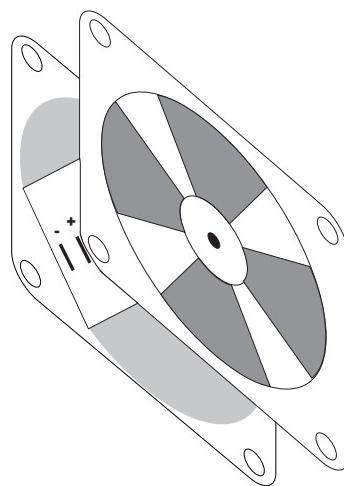


figure 1-5

### WARNING

If the white wire is connected to + and the red wire to -, the FAN does not run. Q3 on PCB A16 will become hot and will eventually burn out.

- 8.** Place the HUMIDIFIER PARTS from the KIT on the new inner right-hand PANEL. Mount them as shown. Mount the CABLE DUCT first. The other parts can be mounted in any sequence. For mounting the GROUND WIRE and PCB A16 see step 9 and 10.

### NOTE

All threads needed for mounting the HUMIDIFIER parts to the right-hand INNER SIDE PANEL are prepared with SCREWS (removed in step 4). The purpose of these SCREWS is to make the SIDE PANEL light-tight as long as no HUMIDIFIER is installed.

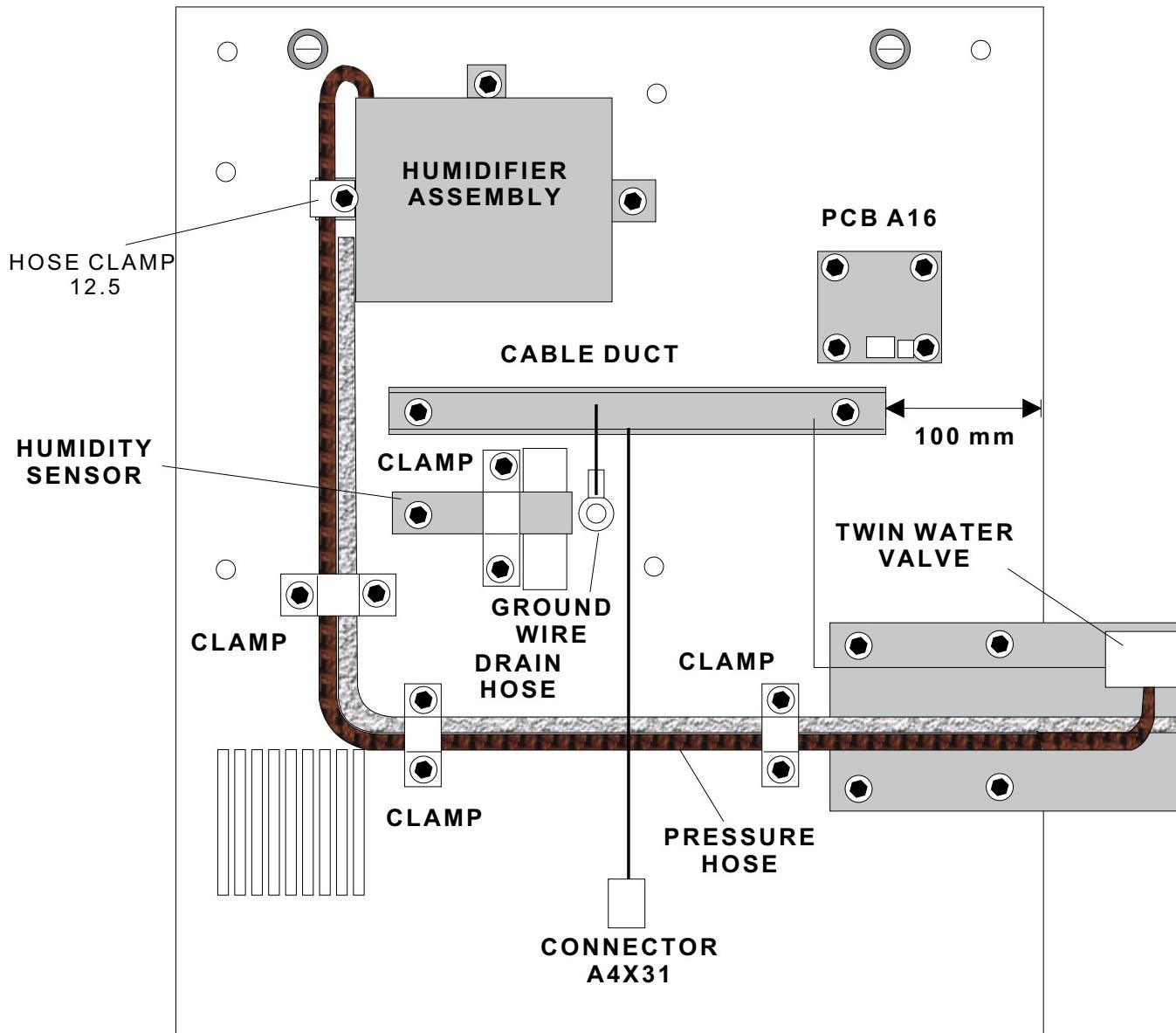


figure 1-6

- 9.** Mount the GROUND WIRE. Use a SCREW M4x8 and a STAR WASHER.

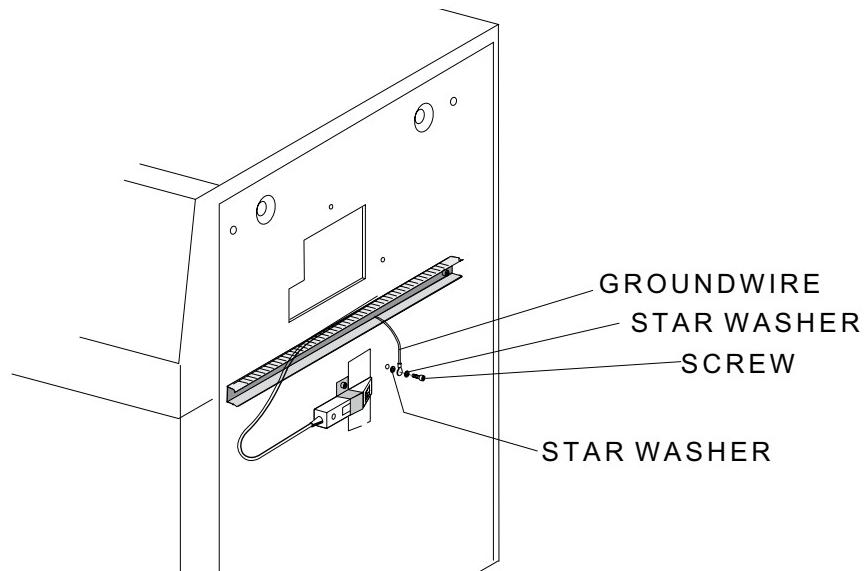


figure 1-7

- 10.** Mount PCB A16. Use 4 SCREWS M4x16 and 4 STANDOFFS.

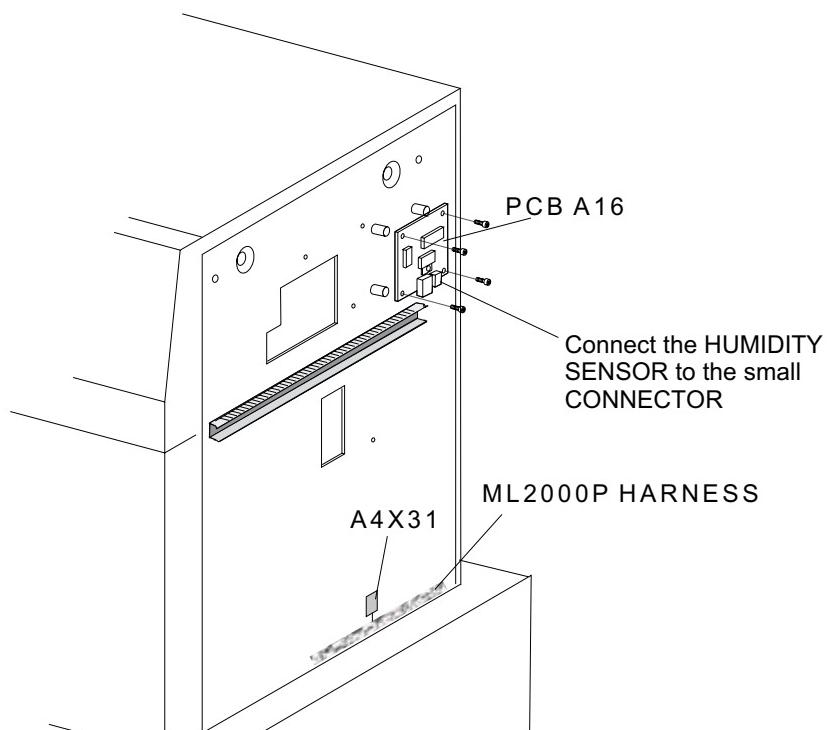


figure 1-8

11. Connect the HUMIDITY SENSOR to the small CONNECTOR on PCB A16. See figure 1-8.
12. Connect the brown PLUG from the WATER LEVEL SWITCH to the brown PLUG of the HUMIDIFIER HARNESS.
13. Connect the 2 large FLAT TAB CONNECTORS from the HUMIDIFIER HARNESS to the outer TWIN WATER VALVE.

#### NOTE

Only 1 side of the TWIN WATER VALVE is used. The other one must be closed properly. To store less spare parts, the TWIN WATER VALVE from the XML300 is used in the ML2000P too.

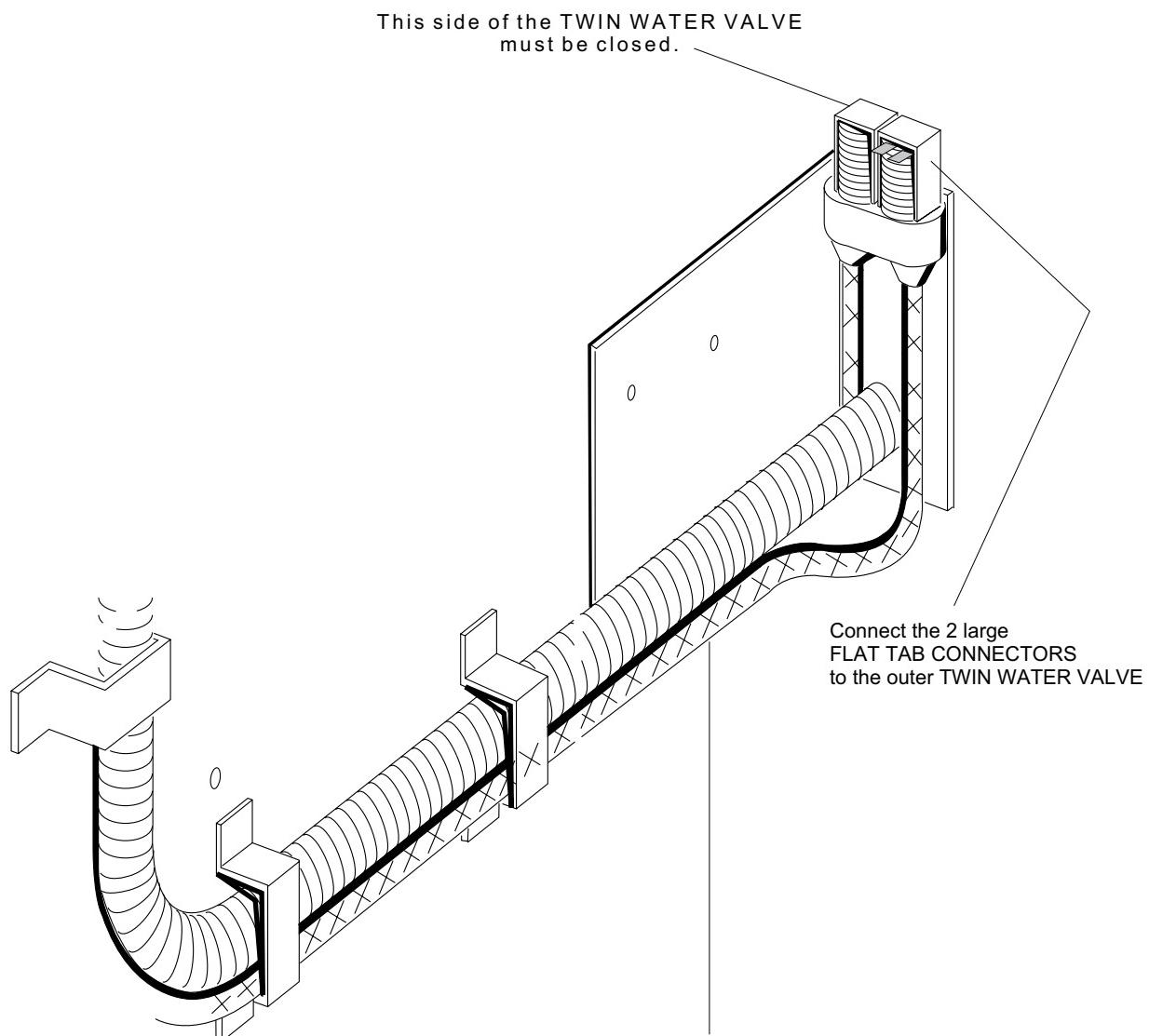
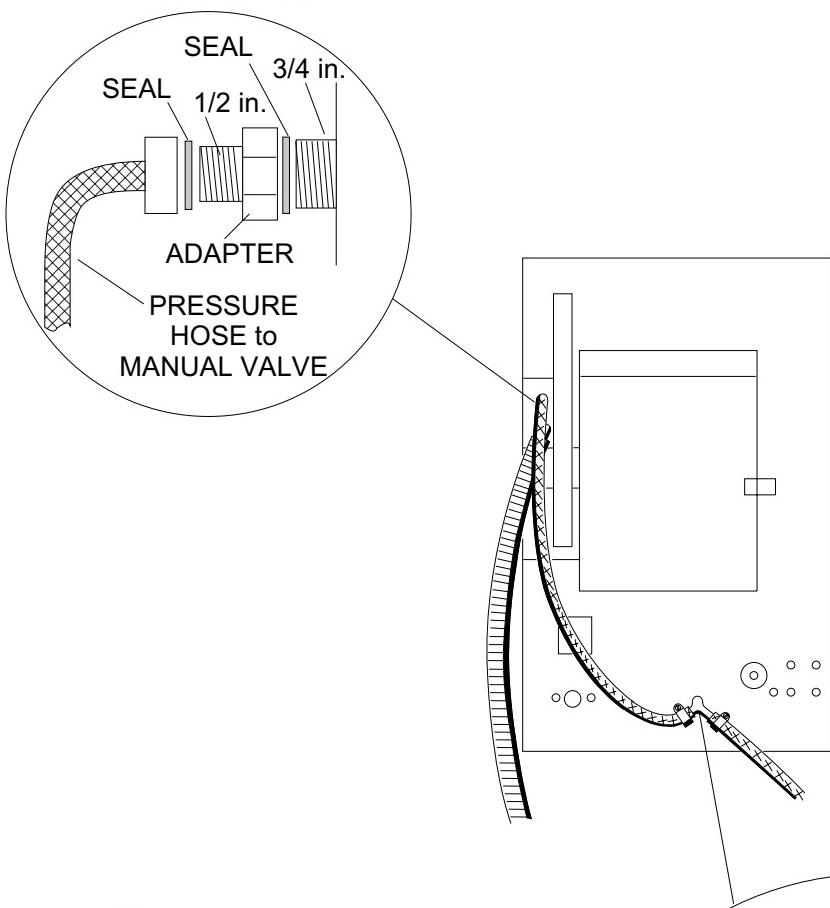


figure 1-9

- 14.** Mount the right-hand INNER SIDE PANEL to the ML2000P.
- 15.** Locate CONNECTOR A4x31 in the ML2000P Harness. Plug in A4X31 from the HUMIDIFIER. See figure 1-8.
- 16.** Route the HUMIDIFIER HARNESS through the CABLE DUCT and close the DUCT.
- 17.** Mount the parts shown in DETAIL A figure 1-10 to the fresh WATER INPUT of the HUMIDIFIER
- 18.** Mount the parts shown in DETAIL B figure 1-10 to the fresh WATER INPUT of the PROCESSOR. If there is a PLASTIC ADAPTER at the PROCESSOR WATER IN, take it out and discard it.  
**To avoid leakage, carefully seal the threads of the ADAPTER (3/8 to 1/ in.), T-ADAPTER and MANUAL VALVE with PIPE THREAD TAPE TL2190 (PN 952960)**
- 19.** Connect the other end of the T-ADAPTER to the WATER SUPPLY.

#### NOTE

The PRESSURE HOSE for the WATER SUPPLY is not supplied with the HUMIDIFIER KIT.

**DETAIL A****\*\***

To avoid leaks,  
use PIPE THREAD  
TAPE TL2190  
(PN 952960).

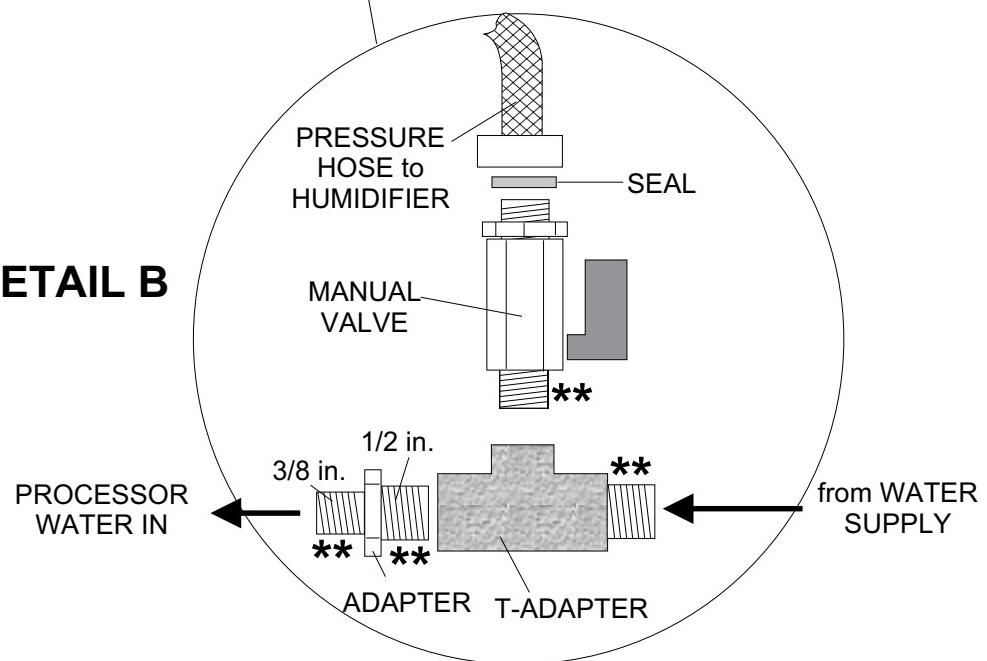
**DETAIL B**

figure 1-10

**20.** Connect the EXTERNAL DRAIN HOSE to the HUMIDIFIER DRAIN. Use a HOSE CLAMP 40-25

**21.** Mount the OVERFLOW and the BRACKET to the lower right-hand corner of the HUMIDIFIER COVER. Use 2 SCREWS M4x10 with WASHERS.

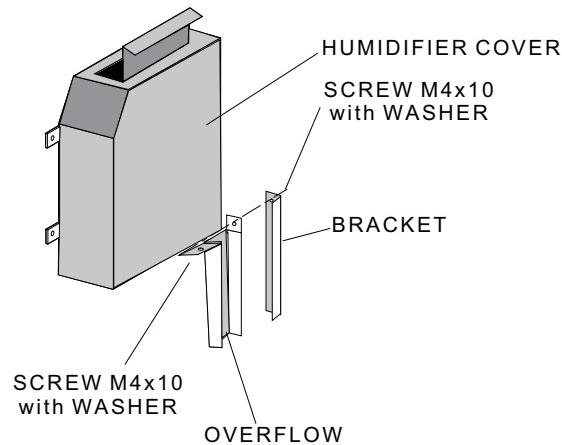


figure 1-11

**22.** Fix the self adhesive SEAL to the BASE of the ML2000P.

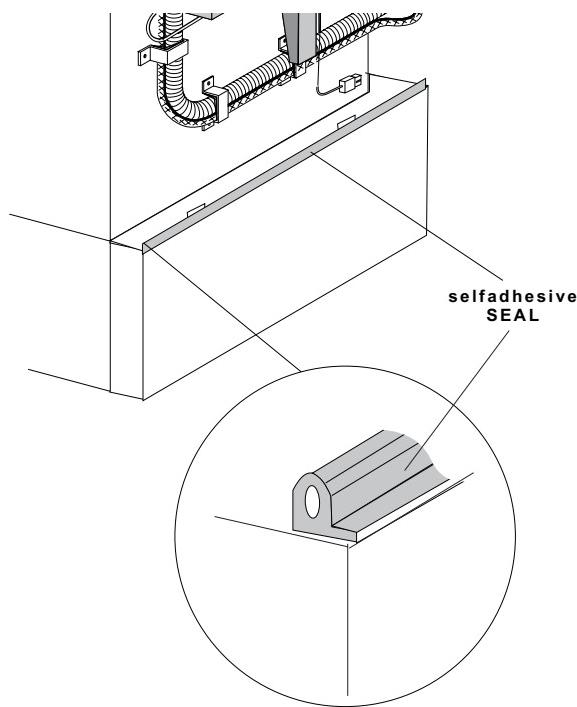


figure 1-12

## FINAL TEST

1. Ensure that the second output of the TWIN WATER VALVE is closed.

### NOTE

Only 1 side of the TWIN WATER VALVE is used. The other one must be closed properly.

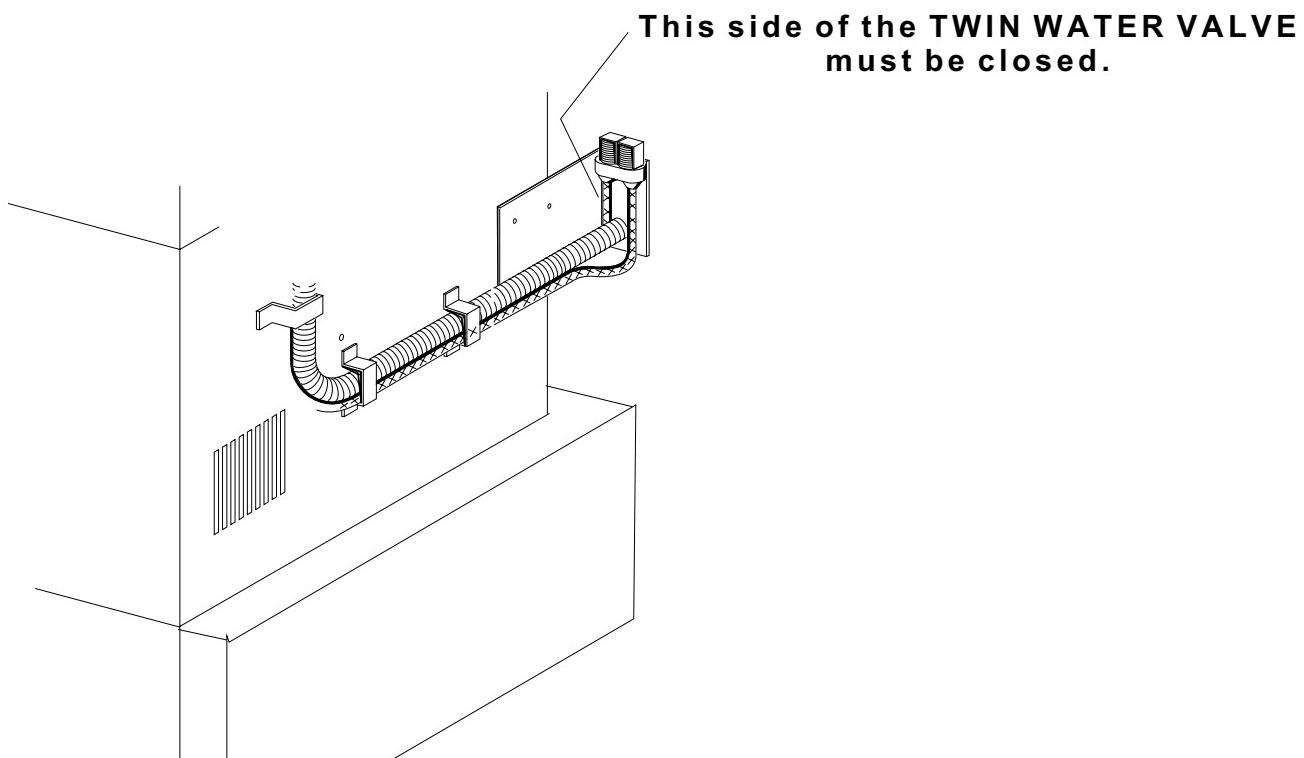


figure 1-13

2. With WATER ON, check that all HOSE CLAMPS and all ADAPTERS are tight.
3. Switch on the ML2000P.
4. Connect the DVM to TEST POINTS TP5 (Plus) and to TP2 (Gnd) of the SENSOR PCB A16. See the drawing on the next page.
5. Adjust R5 until the voltage reading is 4 VDC. This is equal to a relative humidity of 40% RH.
6. If the relative humidity is below 40% the HUMIDIFIER FAN will start. and the WATER RESERVOIR is filled.

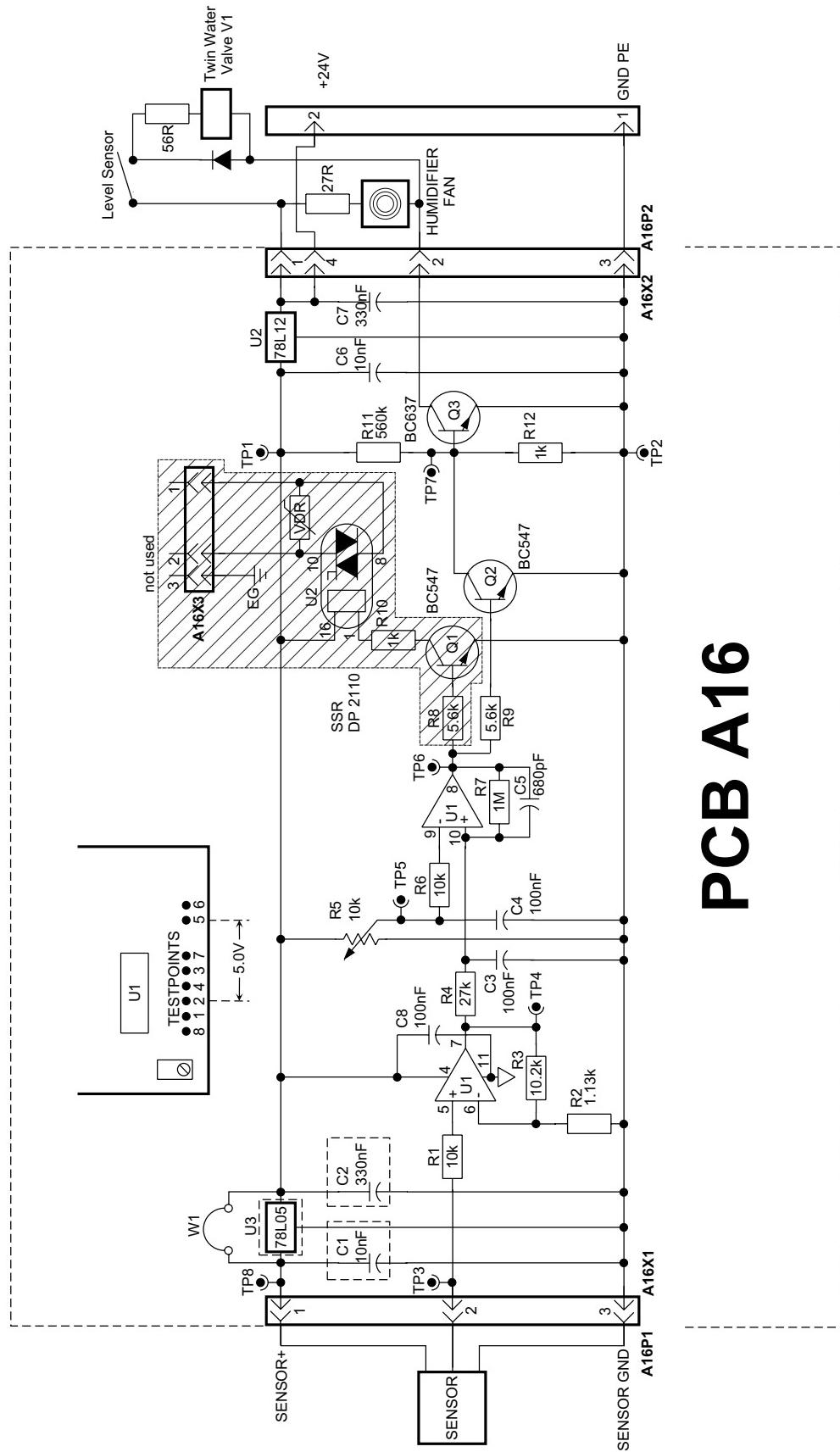


figure 1-14

7. If the relative humidity is above 40 % the HUMIDIFIER FAN will not start. For test purposes set the voltage to a higher value until the FAN starts.
8. Mount the HUMIDIFIER COVER.

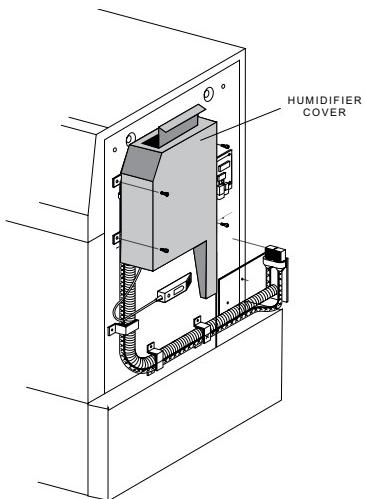


figure 1-15

9. Test the OVER FLOW of the HUMIDIFIER.

#### NOTE

It is a legal requirement that this test is done.

To test it, close the HUMIDIFIER DRAIN HOSE and hold down the WATER LEVEL SENSOR. The WATER RESERVOIR will fill up and will eventually overflow.

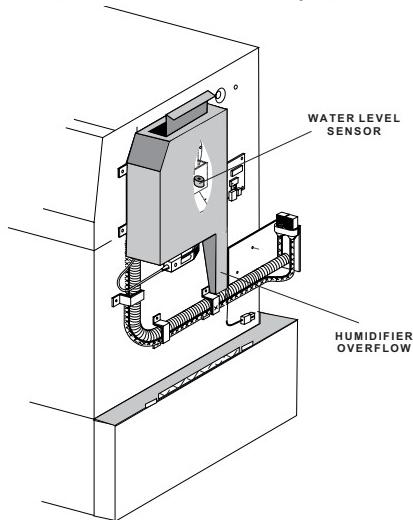


figure 1-16

- 10.** Release the WATER LEVEL SENSOR and open the DRAIN HOSE.
- 11.** If you had to change the voltage in step 5, set it back to 4VDC.
- 12.** Mount the outer right-hand SIDE PANEL.
- 13.** Inform the customer that to minimise biological growth, the HUMIDIFIER FILTER CARTRIDGE must be replaced during PMs or a minimum of twice a year

#### NOTE

The replacement of the HUMIDIFIER FILTER CARTRIDGE must only be done by SERVICE PERSONAL authorised by KODAK.

- 14.** Open the HUMIDIFIER ACCESS PANEL.
- 15.** Insert slowly the HUMIDIFIER FILTER CARTRIDGE to prevent spilling water inside the ML2000 P and to prevent water from flowing over electrical components.

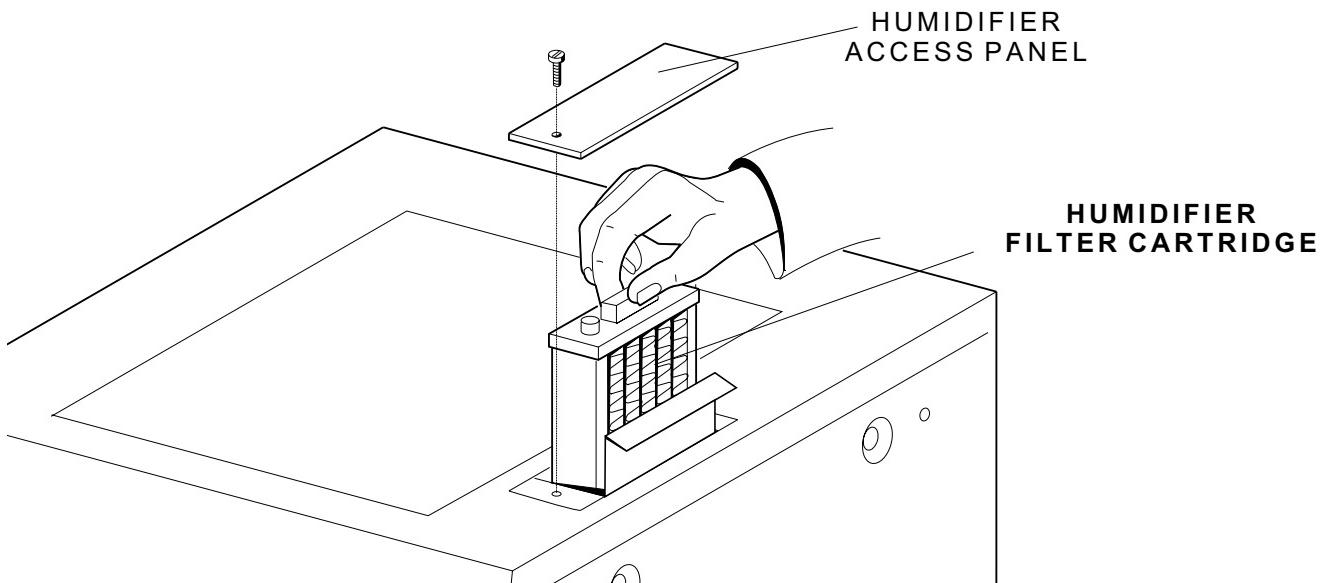


figure 1-17

- 16.** Mount the HUMIDIFIER ACCESS PANEL.

#### WARNING

With the HUMIDIFIER ACCESS PANEL off, the ML2000P is not light-tight.

**NOTE**

**For installations in Germany do step 17.**

- 17.** Place the DVGW LABEL close to the DATA PLATE of the ML2000P.

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